

Notice of Allowability

Application No.

10/054,532

Examiner

Yvette C. Thornton

Applicant(s)

LEE ET AL.

Art Unit

1752

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to amendment filed on December 22, 2003.
2. ☒ The allowed claim(s) is/are 16-21.
3. ☒ The drawings filed on 22 January 2002 are accepted by the Examiner.
4. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☒ All b) ☐ Some* c) ☐ None of the:
 1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08),
Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit
of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☒ Interview Summary (PTO-413),
Paper No./Mail Date _____
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____

Yvette Clarke Thornton
Patent Examiner
Art Unit: 1752

REASONS FOR ALLOWANCE

This is written in reference to application number 10/054532 filed on January 22, 2002 and published as US 2003/0022100 A1 on January 30, 2003.

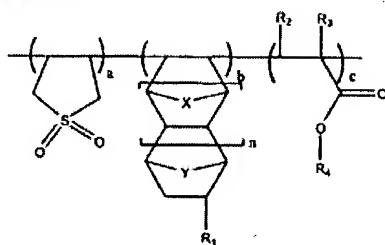
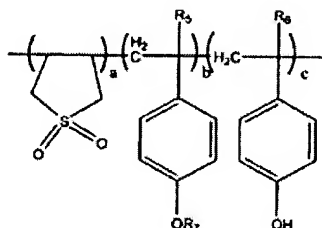
Response to Amendment

1. Claims 1-2, 8-15 and 22-28 have been cancelled. Claim 29 is newly added.
2. Support for the limitations that "at least one of b and c must be present" is found in the specification on page 7, lines 10-12 and page 8, lines 17-19.

EXAMINER'S AMENDMENT

3. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.
4. Authorization for this examiner's amendment was given in a telephone interview with Michael Hull on March 11, 2004.
5. The application has been amended as follows:
 - Please cancel claims 3-7 and 29;
 - In claim 16, line 2 replace "the" with --a--;
 - In claim 16, line 2 replace "the photoresist monomer of claim 3" with --a repeating unit selected from the group consisting of Formula 2 and Formula 3:

Art Unit: 1752

Formula 2Formula 3

wherein R_1 is selected from the group consisting of H, halogen, (C_1-C_{20}) alkyl, (C_1-C_{20}) alkyl with halogen substituent(s), (C_1-C_{20}) alkyl containing an ether group (-O-), (C_1-C_{20}) alkyl with halogen substituent(s) and containing an ether group, and -COOR';

R_2 , R_3 , R_5 and R_6 are individually selected from the group consisting of H, halogen, (C_1-C_{20}) alkyl, (C_1-C_{20}) alkyl with halogen substituent(s), (C_1-C_{20}) alkyl containing an ether group, and (C_1-C_{20}) alkyl with halogen substituent(s) and containing an ether group;

R_1 , R_4 and R_7 are individually acid labile protecting groups;

X and Y are individually selected from the group consisting of (C_1-C_{10}) alkylene, O and S;

n is 0 or 1; and

the ratio a : b : c falls within the ranges 1-50mol% : 0-50mol% : 0-80mol%,

wherein at least one of b and c must be present--.

Allowable Subject Matter

6. Claims 16-21 are allowed.
7. The following is an examiner's statement of reasons for allowance: the prior art reference of Nachbur et al. (US 3449302 A) teaches copolymers comprising vinylidenechloride, butadienesulphone, an ethylenically unsaturated film forming monomer and an ethylenically unsaturated hydrophilic monomer. Nachbur however failed to teach

Art Unit: 1752

and/or suggest the said polymer being admixed with a photoacid generator and an organic solvent to form a photoresist composition. One of ordinary skill in the art would not have been motivated nor would it have been obvious to incorporate a photoacid generator into the teachings of Nachbur.

8. Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Yvette C. Thornton whose telephone number is 571-272-1336. The examiner can normally be reached on Monday-Thursday from 8:00 am to 6:30 pm.

10. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mark F. Huff, can be reached on 571-272-1385. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

11. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access

Application/Control Number: 10/054,532

Page 5

Art Unit: 1752

to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197
(toll-free).

A handwritten signature in black ink, appearing to read "Yvette C. Thornton", with a large, sweeping loop at the end.

Yvette Clarke Thornton
Patent Examiner
Art Unit 1752

yct
March 11, 2004